TENTATIVE AGENDA AND MINIBOOK
STATE WATER CONTROL BOARD MEETING
WEDNESDAY, DECEMBER 14, 2011
AND IF NECESSASRY, THURSDAY, DECEMER 15, 2011

House Room C
General Assembly Building
9th and Broad Streets
Richmond, VA 23219

CONVENE - 9:30 A.M.

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ADJOURN

NOTE: The Board reserves the right to revise this agenda without notice unless prohibited by law. Revisions to the agenda include, but are not limited to, scheduling changes, additions or deletions. Questions arising as to the latest status of the agenda should be directed to the staff contact listed below.

PUBLIC COMMENTS AT STATE WATER CONTROL BOARD MEETINGS: The Board encourages public participation in the performance of its duties and responsibilities. To this end, the Board has adopted public participation procedures for regulatory action and for case decisions. These procedures establish the times for the public to provide appropriate comment to the Board for its consideration.

For REGULATORY ACTIONS (adoption, amendment or repeal of regulations), public participation is governed by the Administrative Process Act and the Board's Public Participation Guidelines. Public comment is accepted during the Notice of Intended Regulatory Action phase (minimum 30-day comment period) and during the Notice of Public Comment Period on Proposed Regulatory Action (minimum 60-day comment period). Notice of these comment periods is announced in the Virginia Register, by posting to the Department of Environmental Quality and Virginia Regulatory Town Hall web sites and by mail to those on the Regulatory Development Mailing List. The comments received during the announced public comment periods are summarized for the Board and considered by the Board when making a decision on the regulatory action.

For CASE DECISIONS (issuance and amendment of permits), the Board adopts public participation procedures in the individual regulations which establish the permit programs. As a general rule, public comment is accepted on a draft permit for a period of 30 days. If a public hearing is held, there is an additional comment period, usually 45 days, during which the public hearing is held.

In light of these established procedures, the Board accepts public comment on regulatory actions and case decisions, as well as general comments, at Board meetings in accordance with the following:

REGULATORY ACTIONS: Comments on regulatory actions are allowed only when the staff initially presents a regulatory action to the Board for final adoption. At that time, those persons who commented during the public comment period on the proposal are allowed up to 3 minutes to respond to the summary of the comments presented to the Board. Adoption of an emergency regulation is a final adoption for the purposes of this policy. Persons are allowed up to 3 minutes to address the Board on the emergency regulation under consideration.

CASE DECISIONS: Comments on pending case decisions at Board meetings are accepted only when the staff initially presents the pending case decision to the Board for final action. At that time the Board will allow up to 5 minutes for the applicant/owner to make his complete presentation on the pending decision, unless the applicant/owner objects to specific conditions of the decision. In that case, the applicant/owner will be allowed up to 15 minutes to make his complete presentation. The Board will then allow others who commented during the public comment period (i.e., those who commented at the public hearing or during the public comment period) up to 3 minutes to respond to the summary of the prior public comment period presented to the Board. No public comment is allowed on case decisions when a FORMAL HEARING is being held.

POOLING MINUTES: Those persons who commented during the public hearing or public comment period and attend the Board meeting may pool their minutes to allow for a single presentation to the Board that does not exceed the time limitation of 3 minutes times the number of persons pooling minutes, or 15 minutes, whichever is less.

NEW INFORMATION will not be accepted at the meeting. The Board expects comments and information on a regulatory action or pending case decision to be submitted during the established public comment periods. However, the Board recognizes that in rare instances, new information may become available after the close of the public comment period. To

provide for consideration of and ensure the appropriate review of this new information, persons who commented during the prior public comment period shall submit the new information to the Department of Environmental Quality (Department) staff contact listed below at least 10 days prior to the Board meeting. The Board's decision will be based on the Department-developed official file and discussions at the Board meeting. In the case of a regulatory action, should the Board or Department decide that the new information was not reasonably available during the prior public comment period, is significant to the Board's decision and should be included in the official file, the Department may announce an additional public comment period in order for all interested persons to have an opportunity to participate.

PUBLIC FORUM: The Board schedules a public forum at each regular meeting to provide an opportunity for citizens to address the Board on matters other than those on the agenda, pending regulatory actions or pending case decisions. Those wishing to address the Board during this time should indicate their desire on the sign-in cards/sheet and limit their presentations to 3 minutes or less.

The Board reserves the right to alter the time limitations set forth in this policy without notice and to ensure comments presented at the meeting conform to this policy.

Department of Environmental Quality Staff Contact: Cindy M. Berndt, Director, Regulatory Affairs, Department of Environmental Quality, 629 East Main Street, P.O. Box 1105, Richmond, Virginia 23218, phone (804) 698-4378; fax (804) 698-4346; e-mail: cindy.berndt@deq.virginia.gov.

Rivanna Water & Sewer Authority - Rivanna Reservoir VWP Permit Modification: Go to page 12

Final Exempt Action, 2011 CFR Update - 9VAC25-31: This regulatory amendment is presented to the Board for your consideration as final regulation. The Virginia Pollutant Discharge Elimination System (VPDES) Permit Regulations, 9VAC25-31, includes citations and requirements in the form of incorporated sections of Title 40 of the Code of Federal Regulations (CFR). This regulatory amendment will update these citations and incorporation of Title 40 of the CFR as revised as of July 1, 2011. CFR reference dates within this regulation were deleted and a new section, 9VAC25-31- 25, was added. This new section updates all references to the CFR to the most current annual update of the CFR, revised as of July 1, 2011. Furthermore, the addition of this new section will simplify future CFR updates for this regulation as only 9VAC25-31-25 will need to be amended.

Report On Facilities In Significant Noncompliance: Two permittees were reported to EPA on the Quarterly Noncompliance Report (QNCR) as being in significant noncompliance (SNC) for the quarter ending June 30, 2011. The permittees, their facilities and the reported instances of noncompliance are as follows:

1.	Permittee/Facility:	**New Kent County, Parham Landing Wastewater Treatment Plant**
	Type of Noncompliance:	**Failure to Meet Permit Effluent Limits (Total Kjeldahl Nitrogen)**
	City/County	West Point, Virginia
	Receiving Water:	Pamunkey River
	Impaired Water:	The Pamunkey River is impaired because of the presence of excessive amounts of E. coli and enterococci. Additionally it is assessed as impaired because of the presence of mercury and PCBs in fish issue and because of the lack of biologic integrity revealed by an estuarine bioassessment of its aquatic life. It is also considered impaired due to nutrient enrichment. The sources of excessive E. coli and enterococci are unknown. The presence of mercury is attributed to atmospheric deposition from unknown sources. The source of the PCB contamination is unknown. The reason for the lack of biologic integrity is attributed to contaminated sediments. The source of the nutrient enrichment is unknown.
	River Basin:	York River Basin
	Dates of Noncompliance:	November and December, 2010, January and April 2011
	Requirements Contained In:	VPDES Permit
	DEQ Region:	Piedmont Regional Office

Staff from the Piedmont Regional Office is in the process of evaluating this case for enforcement action. An upgrade to the wastewater treatment plant, designed to ensure compliance with Total Kjeldahl Nitrogen (TKN) permit limits was completed at the end of 2010. A certificate to operate the plant was requested in January 2011. The schedule for completion of the upgrade was required by a Letter of Agreement issued to the County. TKN permit limits were met in February and March of 2011 however violations of the limits occurred in April of 2011. (Compliance with TKN permit effluent limits was also achieved from May through July but again violations of the TKN limits occurred in August of 2011.)

2. Permittee/Facility: **Town of Elkton, Elkton Sewage Treatment Plant**
Type of Noncompliance: **Failure to Comply with Schedule to Complete Construction**
City/County: Elkton, Virginia
Receiving Water: South Fork Shenandoah River
Impaired Water: The South Fork Shenandoah River is listed on the 303(d) list as impaired for fecal coliform and due to benthic impairments. The source of the fecal coliform impairment is believed to be non-point source pollution. The source of the benthic impairments is unknown.
River Basin: Potomac River Basin
Dates of Noncompliance: April 2011 and May 2011
Requirements Contained In: Consent Special Order
DEQ Region: Valley Regional Office

The schedule violations were addressed through an amended consent special order approved by the Board at its August 2011 meeting.

The Madeira School, Incorporated Madeira WWTP - Consent Special Order - Amendment: The Madeira School, Incorporated (Madeira) owns The Madeira School WWTP (Facility) located in McLean, VA. The Facility is operated by Environmental Systems Service, Ltd. (ESS). Madeira was referred to enforcement on July 21, 2004 for violations of the Permit limits for BOD5, TSS, Ammonia as N, Total Residual Chlorine and an unreported value for dissolved copper. To resolve the effluent violations, Madeira and DEQ entered in a Consent Order (Order) on March 17, 2006. The Order required Madeira to implement some short-term upgrades/fixes as it either hooked-up to the Fairfax County sanitary sewer system or constructed a new treatment plant. In accordance with the Order, Madeira determined that the construction of a new plant would be the best course of action. The Order detailed a schedule of compliance and set forth a timeline to complete the construction of the new treatment plant and for Madeira to achieve compliance with Permit limits. In accordance with the Order, Madeira completed construction of the new 0.0395 MGD plant (Plant) in May 2010 and applied for a Certificate to Operate (CTO) on May 24, 2010. During the June 2010 monitoring period, Madeira violated the minimum concentration limit for Dissolved Oxygen (DO). During July 2010, Madeira violated the limits for Total Recoverable Copper. During the August 2010 monitoring period, Madeira violated the limits for Total Recoverable Copper. On August 10, 2010, Madeira reported an unauthorized discharge of 2,300 gallons of partially treated wastewater without UV treatment into state waters. ESS reported that the discharge without UV was due to an accidental disengagement of the UV system during routine cleaning of the unit that occurred on August 8, 2010. On March 8, 2011, Madeira submitted the January 2011 Discharge Monitoring Report (DMR) late. The DMR was due to DEQ on February 10, 2011. Madeira reported to DEQ that during the April 2011 monitoring period, Madeira violated the limits for Total Recoverable Copper. Madeira reported to DEQ that during the May 2011 monitoring period, Madeira violated the limits for Total Recoverable Copper. Issue an Amended Consent Order with a civil penalty and injunctive relief. The Appendix will require Madeira to conduct a Water Effects Ratio study in order to re-evaluate copper effluent limits, and submit a plan and schedule for meeting effluent limits if the WER study does not justify relaxation of the copper limits. The cost associated with returning to compliance, will be approximately $20,000. Civil charge: $4,550.

Aqua Virginia Utilities, Inc. (Aqua) - Consent Special Order - Issuance: On June 25, 2010, the Department issued a Consent Order to Manakin Water and Sewerage Corporation (Manakin Farms) for exceeding Permit discharge limitations for TKN, ammonia, and TSS at the Facility. The Order required Manakin Farms to either upgrade the Facility to consistently meet Permit limits or sell the Facility. On August 1, 2011, Aqua purchased the Facility from Manakin Farms. The Permit has been transferred to Aqua, who is now the owner and operator of the Facility. An upgrade is still required at the Facility, and Aqua needs to submit to an enforceable schedule to upgrade the Facility. Aqua also needs to maintain compliance with interim effluent limits for ammonia and TKN. This proposed Consent Order will require both.

DuPont Teijin Films U.S. Limited Partnership - Consent Special Order – Issuance: Teijin owns and operates two wastewater treatment plants located at DuPont Teijin Films, 3600 Discovery Drive, Chesterfield, Virginia ("Facility"). One plant is an industrial wastewater treatment plant and the second plant is a sanitary wastewater treatment plant. The industrial wastewater plant discharges through internal Outfall 101 and the sanitary wastewater plant discharges through internal Outfall 102. Both Outfalls 101 and 102 ultimately discharge to the James River via Outfall 001. These plants operate under VPDES Permit No. VA0003077. Currently, Teijin manufactures polyester resin at the Facility using two processes. The first process uses dimethyl terephthalate ("DMT") and the second process uses terephthalic acid ("TPA"). The first process results in methanol and glycol byproducts and the second process results in water and glycol byproducts. Teijin is currently in the process of converting the Facility to utilize only the second (TPA) process. Teijin will not be using any new raw materials, instead, it will be eliminating the use of DMT in its manufacturing process. Teijin indicated in its monthly DMRs, as required by the Permit, that it exceeded discharge limitations contained in Part I.A of the Permit, for BOD_5, during the months of January, May, June, August and September, 2010. Teijin attributed the violations variously to industrial treatment plant upsets, excessive organic loading and/or poor wastewater clarification. Teijin also indicated that it exceeded discharge limitations contained in Part I.A of the Permit, for DO, during the month of July, 2010. On May 11, 2011, Permit No. VA0003077 was administratively continued. Teijin has applied for a new permit, however, Teijin will not be able to meet the proposed, more stringent BOD limits for internal Outfall 101 in the new permit until it has completely converted to the TPA process and upgraded its industrial wastewater treatment plant. Due to federal effluent guidelines, a compliance schedule with interim limits cannot be set out in the new permit. As a result, Teijin has requested a consent order with a compliance schedule, which is incorporated in Appendix A of the Order, to upgrade the Facility. Teijin must complete upgrade or replacement of the industrial treatment plant on or before August 1, 2014. Until complete installation of the final P.E. approved design or until August 1, 2014, whichever occurs first, Teijin is required to continue to meet effluent limits for BOD_5 at internal Outfall 101 of a maximum loading of 11.6 kg/day and a monthly average loading of 4.4 kg/day. From and after August 1, 2014 Teijin must meet the more stringent effluent limits of the Permit. The Order also requires Teijin to submit to DEQ, a status report, every six months from the effective date of the Order regarding the progress of the project.

S.B. Cox Ready Mix, Inc. - Consent Special Order w/ Civil Charges: S.B. Cox Ready Mix, Inc. ("SB Cox") owns and operates a number of ready-mix concrete facilities, including: the Doswell Plant, the Goochland Plant, the Portugee Road Plant, and the Powhatan Plant. On November 10, 2010, DEQ staff, conducted an inspection and file review of the Doswell Plant and observed a number of permit violations. The file review revealed that SB Cox failed to submit the Doswell Plant annual Discharge Monitoring Reports (DMRs) for 2 years. The Doswell Plant inspection revealed that SB Cox failed to: 1) have an SWP3 developed and on site; 2) conduct and provide records for required quarterly storm water visual monitoring; and, 3) contain waste concrete in the designated waste concrete area. A subsequent file review also revealed that SB Cox failed to submit annual DMRs for the Goochland Plant, the Portugee Road Plant, and the Powhatan Plant. On April 7, 2011, DEQ staff conducted a review of the files and an inspection of the Portugee Road Plant and observed a number of permit violations. The Portugee Road Plant inspection revealed that SB Cox failed to: 1) have a Stormwater Pollution Prevention Plan (SWP3) developed and on site; and 2) conduct and provide records for required quarterly storm water visual monitoring. During negotiations of the Consent Order SB Cox submitted a SWP3 for each of the facilities. The Appendix requires that SB Cox respond to comments on their SWP3, submit confirmation that they've completed training in SWP3 requirements, move the waste concrete back within the boundaries of the designated waste concrete area and develop a written procedure for reporting/recordkeeping at an estimated cost of $2000. Civil charge: $12,739 to be paid in 4 installments

KVK Precision Specialties, Inc. ("KVK") - Consent Order W/Civil Charges: KVK is a company which specializes in precision metal machining and fabrication in the Town of Shenandoah, in Page County Virginia. On May 17, 2011, DEQ received a pollution complaint reporting foam in storm water emanating from the area at or near KVK. DEQ staff investigated the complaint and observed white foam in the roadside ditch in the area around 320 Quincy Avenue in the Town of Shenandoah. DEQ staff followed the ditch/foam up to a point opposite from KVK where a hose was found discharging into the ditch. Staff noted that the hose came from KVK. DEQ staff requested and were granted permission to enter the Company's building to trace the source of the discharge. DEQ staff were shown two long, rectangular tanks, each with a capacity of approximately 4,000 gallons of liquid. KVK indicated that the hose was attached to the tank which was an acid wash for etching/degreasing steel. The second tank was identified by KVK staff as spent rinse water. Company staff indicated that a neutralizer was added to the acid wash prior to discharge to the ditch and included a detergent, which caused the foam. During the investigation, DEQ staff told the Company that it could not continue discharging to the ditch until it obtained a discharge permit from DEQ. After leaving KVK, DEQ staff followed the

discharge path to a point where it entered an unnamed tributary to the South Fork of the Shenandoah River. Staff observed a massive amount of foam at various points along the discharge path and on the receiving stream. On May 18, 2011, DEQ conducted a follow-up investigation to determine the nature of the liquids that were discharged to the unnamed tributary from KVK. During on-site discussions, KVK indicated that the wash tank is used for cleaning steel prior to processing operations and that it only works on ferrous steel (no exotic metals). KVK indicated that the wash-water is 3 percent (by volume) of a product containing phosphoric acid (less than 5 percent). The Company personnel indicated that the wash-water is in the pH range of 4.0 to 4.5. During the May 18, 2011, follow-up investigation, DEQ staff informed KVK that it would need to characterize the wash-water, the rinse-water and the sludge remaining in the tanks before it could be properly disposed. The Company told DEQ that the contents of the tanks were discharged to the ditch the previous evening. DEQ staff confirmed that the remainder of the wash-water and all of the rinse water had been released after DEQ's inspection the previous day. KVK did not report the unpermitted discharge to DEQ within 24 hours as required by Va. Code and VAC regulation 9 VAC 25-31-50. Later in discussions with KVK, it indicated that it discharged the industrial wastewaters because of apparent time limitations to arrange for the wastewaters to be pumped/hauled before beginning a new metal processing operation/job. The proposed Order contains a civil charge and requires KVK to properly dispose of its wastewater in the future. The proposed Order also contains a SEP. Civil charge and SEP: $21,820. The proposed Order contains a SEP to partially offset the civil charge contained in the Order. The SEP proposal is to protect water quality through the construction of a pole barn to cover certain industrial scrap or raw metal, cardboard and other materials that are presently stored outside and are uncovered. By covering these industrial materials/metal products with a pole barn, the SEP will protect the environment by preventing the exposure of these industrial materials to storm water which discharge offsite.
The SEP (offset) Mitigation Amount is $14, 334. The SEP meets all of the regulatory requirements including those of being environmentally beneficial, having good geographic nexus, and that the SEP is not otherwise be required to be performed by law. There are no regulatory requirements to have the industrial products covered and prevent exposure to storm water. All of the activities proscribed to be completed as part of the SEP are located onsite and adjacent to the stream where the unpermitted discharge violation occurred and therefore has direct and reasonable nexus to the violation.

Shrine Mont, Inc. ("Shrine Mont") STP - Consent Special Order - Issuance: Shrine Mont owns and operates the Facility, which serves the Virginia Hotel conference center, other buildings, campgrounds and 17 single-family residences in the Town of Orkney Springs, Virginia. Shrine Mont is a non-profit organization which operates the resort primarily from early spring to mid-November. The Facility is subject to the Permit, which authorizes the Facility to discharge treated wastewater to an unnamed tributary to Stony Creek, in the Shenandoah River subbasin, Potomac River basin, in strict compliance with the terms and conditions of the Permit. Historically (since 2007), Shrine Mont has had periodic seasonal problems meeting certain permit effluent limitations, primarily ammonia, but also total suspended solids ("TSS") and carbonaceous biochemical oxygen demand ("$CBOD_5$"). The $CBOD_5$ violations tend to correlate strongly with flow. The ammonia violations have primarily occurred in late summer and early fall months. Most recently, Shrine Mont violated ammonia effluent limits in September and October 2009 and from May through October 2010, in December 2010, and February 2011. Facility inspections and communications from Shrine Mont indicate that the violations were related to operational and maintenance issues related to the Facility's nitrification chamber and aeration system. The proposed Order contains a plan and schedule for Shrine Mont to connect the Facility to the Stoney Creek Sanitary District Collection System and requires repair of the Facility's aeration system in the interim.

Brambleton Group, LLC - Issue a Consent Order with a civil penalty and injunctive relief: Brambleton Group, LLC (Brambleton Group) owns the Brambleton – Phase II (site), a 2,000 acre mixed use planned community with residential units, schools, a village center, community center/place of worship, playing fields, a recreation center, parks, a golf course, and associated infrastructure located on the east and west sides of Belmont Ridge Road (Route 659), just north of its intersection with Evergreen Mills Road (Route 621) in Loudoun County, Virginia. DEQ issued a VWP Individual Permit Authorization No. 03-2118 (Permit) on February 24, 2004 to the Brambleton Group. On September 3, 2008, DEQ staff conducted a routine compliance site visit of Brambleton - Phase II. As a result of the site visit, DEQ sent a compliance letter to the Brambleton Group on October 23, 2008. This letter detailed a failure to submit compliance reports and that the stem count required for a portion of the compensation site was not being met. The letter requested the Brambleton Group to submit the required reports and a corrective action plan for the areas not meeting success criteria in the wetland mitigation site to DEQ. No response from the Brambleton Group was received by DEQ. On December 9, 2009, DEQ completed a compliance review of the permit file and subsequently conducted a compensation site inspection on December 29, 2009 to determine compliance with the conditions and requirements of the Permit and the State Water Control Law and Regulations. Based on the December 9, 2009 file review and the observations made during the

December 29, 2009 inspection, DEQ issued Notice of Violation (NOV) No. W2010-02-N-0010, dated February 18, 2010, to the Brambleton Group citing the following violations:

1. Failure to meet success criteria for the compensation site in accordance with Permit Special Condition Part I.K.9.
2. Failure to submit a survey/plat of the stream areas to be preserved for stream channel compensation consisting of 17,323 linear feet of perennial stream channel, 4,516 linear feet of intermittent stream channel, and 61.99 acres of upland buffer evidencing the preservation in perpetuity, in accordance with Permit Special Condition Part I.D.14.
3. Failure to submit a survey/plat of the completed wetland compensation areas or documentation that these areas have been surveyed or platted in accordance with Permit Special Condition Part I.D.15.
4. Failure to provide the required semi-annual construction monitoring reports documenting construction activities in the permitted impact areas in accordance with Permit Special Condition Part I.D.9.
5. Failure to provide the required annual mitigation monitoring reports in accordance with Permit Special Condition Part I.D.17.
6. Failure to provide a pre-construction notification that construction was to commence in the permitted impact areas, in accordance with Permit Special Condition Part I.D.16.

DEQ sent various emails to Acorn Environmental, Inc. (Acorn), the Brambleton Group's consultant, between February 2010 and June 2010 requesting status updates. Acorn replied providing non-substantive responses. DEQ conducted a partial compliance inspection of the construction activities on August 18, 2010 and completed the inspection on August 25, 2010. During this inspection, DEQ staff observed unauthorized permanent impacts to 890 linear feet of stream channel, 0.11 acre of PFO wetland and 0.40 acre of preservation area. As a result of the August 18, 2010 and August 25, 2010 inspections, DEQ issued NOV No. W2010-09-N-0001, dated September 3. 2010, to Brambleton Group for the violation of Va. Code § 62.1-44.15:20, VWP Permit Program Regulation 9 VAC 25-210-50, and Permit Special Condition Part.I.A.3. On September 9, 2010, Acorn responded on behalf of Brambleton Group to both NOVs. The response included the following for the wetland mitigation site: a conceptual corrective action plan, the proof of recordation of the declaration of restrictions and covenants, and the wetland mitigation monitoring reports for years two and three, as well as, a narrative addressing the lack of construction monitoring reports. On September 14, 2010, DEQ staff met with a representative of the Brambleton Group and Acorn to discuss the violations and the proposed plans to return to compliance. At the meeting, DEQ provided comments to the September 9, 2010 NOV response. Acorn requested that DEQ conduct a follow-up inspection with both Acorn and a Brambleton Group representative to review and confirm the unauthorized impacts referenced in the September 3, 2010 NOV. On September 27, 2010, DEQ Staff conducted a follow-up site inspection as requested by Brambleton Group. On April 19, 2011, Acorn submitted a letter detailing a revised assessment of the impacts taken on-site. The revised totals are 0.044 acres of PFO and 535 linear feet (0.058 acres) of stream channel. DEQ has reviewed and accepted the revised totals. On June 8, 2011, Acorn submitted via electronic mail a report of additional impacts of 4.04 acres of upland buffer that had been proposed for compensatory mitigation of stream impacts, not listed in the two previous NOVs. Issue a Consent Order with a civil penalty and injunctive relief. The Appendix will require the submittal of a Corrective Action Plan (CAP) for the mitigation site to achieve success, a CAP for the unpermitted impacts associated with the construction site referenced above and the submittal of a revised stream Preservation plan. The cost associated with returning to compliance, will be approximately $265,850.00. Civil charge: $103,950.

Dr. Lawrence V. Phillips- The Highlands - Consent Special Order- Issuance: The Highlands property (Property) consists of single family homes on 3+ acre lots, including roads, drain fields, and associated infrastructure. Permit No. WP4-03-1536 (the Permit) was issued to Dr. Phillips on October 28, 2003, and authorized permanent impacts to 0.837 acres of surface waters, including 0.45 acre of Palustrine Forested Wetlands (PFO), 0.31 acre of Palustrine Emergent Wetlands (PEM), and 0.077 acre (1, 408 linear feet) of stream channel, and temporary impacts to 0.001 acre (5 linear feet) of stream channel. The required compensatory mitigation for the impacts above consisted of the purchase of 1.21 credits from the Cedar Run Wetland Mitigation Bank in Prince William County, Virginia, and the preservation of 1.07 acres of forested stream buffer along 630 linear feet of stream channel, and enhancement of 1.62 acre of planting woody species along 870 linear feet of unforested stream buffer, in accordance with the Permit, and the Final Wetland Mitigation Plan May dated October 10, 2003. Dr. Phillips sold the Property in May 2004, however Dr. Phillips did not file for a transfer of permit ownership with DEQ. On May 21, 2008, DEQ Staff conducted an inspection of the Property and a subsequent file review to determine compliance with the Permit. Staff observed that the proof of recorded restrictive covenants and plats, proof of purchase of the required 1.21 mitigation bank credits from the Cedar Run Mitigation Bank , and restoration monitoring reports to demonstrate the progress and success of restoration activity had not been submitted. DEQ issued a

Warning Letter on December 22, 2009, to Dr. Phillips for the aforementioned violations. Dr. Phillips responded to the Warning Letter stating that he no longer owned the Property, did not perform any construction or cause any impacts to wetlands on the Property, and acknowledged that it appeared that the compensation requirements had not been completed. DEQ issued a Notice of Violation to Dr. Phillips on January 25, 2010, for the aforementioned violations. The Order requires Dr. Phillips to provide compensation for the permitted impacts to approximately 0.76 acres of wetland impacts by purchasing 1.21 credits from a DEQ approved wetland mitigation bank located within the same U.S. Geological Survey Hydrologic Unit Code (HUC) as the Property or an adjacent HUC located within the Potomac River Watershed and provide proof of purchase to DEQ, provide compensation for stream impacts by purchasing 38 stream credits from a DEQ approved stream mitigation bank located within the same HUC as the Property of an adjacent HUC located within the Potomac River watershed and submit proof of purchase to DEQ.

Loudoun County Sanitation Authority (d.b.a. Loudoun Water) - Consent Special Order w/ Civil Charges: Loudoun Water (Loudoun) operates the Courtland Rural Village Water Reclamation Facility (WRF) which collects municipal sewage from Courtland Rural Village, a residential development. The WRF is the subject of Permit No. VPA00010 (Permit) which allows Loudoun to treat wastewater which is then pumped to a system storage pond and finally to a wet well at the Creighton Farms Golf Course for use in irrigating the course. The Permit sets forth restrictions including limiting the monthly average of carbonaceous biochemical oxygen demand ($CBOD_5$) to no more than 8 mg/L and the daily average for Turbidity to no more than 2.0 nephelometric turbidity units (NTU). Loudoun is to report results of its sampling to DEQ on monthly monitoring reports (MR). Loudoun reported an exceedance of the monthly average limit for $CBOD_5$ on its November MR by reporting a value of 21 mg/L. Loudoun submitted an explanation that it believed the high result was a laboratory error. Loudoun began using a contract laboratory in October due to staffing issues. Beginning February 2011, Loudoun advised it would begin in-house laboratory work again. On its December 2010 MR, Loudoun reported an exceedance of the monthly average limit for $CBOD_5$ by reporting a value of 18.8 mg/L. Loudoun provided a letter of explanation with the MR that attributed the violation to excess surges of flow coming into the WRF. In order to alleviate this, Loudoun placed a second process treatment train in service. Loudoun also reported a daily exceedance of the daily average limit for Turbidity by reporting 2.19 NTU for one day. On its January 2011 MR, Loudoun reported an exceedance of the monthly average limit for $CBOD_5$ by reporting a value of 16.7 mg/L. In addition, for 29 days, Loudoun reported daily average Turbidity over 2.0 NTU. Loudoun explained in its letter of explanation that placing the second train in service diluted the active biomass inventory causing a temporary imbalance. The addition of the second train also contributed to the increase in Turbidity. Additionally, Loudoun reported that the Turbidity monitor malfunctioned leading to high turbidity readings on January 2, 2011. Loudoun replaced the meter's photo eye correcting the malfunction. Loudoun reported 27 days with a daily average Turbidity value above 2.0 NTU on its February 2011 MR. Loudoun attributed one of these readings to a piece of paper trash that had wrapped around the photo cell of the meter. Also, Loudoun asserted that as the solids inventory and the wastewater temperature increase, the clarity of the water would improve resulting in lower turbidity results. On June 9, 2011, DEQ held a conference call with Loudoun to discuss the violations and potential corrective actions. During this conference call, Loudoun advised that the influent concentration of biochemical oxygen demand (BOD) that the WRF receives is a stronger concentration than what was envisioned when the WRF was first designed. Due to the strength of the influent, Loudoun Water advised there is the possibility that it may experience difficulties in meeting permit limits. Loudoun was working on a sampling plan which it would then use to complete modeling for the WRF and ultimately decide if changes are needed in plant design. After the conference call with Loudoun, DEQ conducted a more in depth analysis of the MRs submitted by Loudoun and found additional exceedances of the daily average Turbidity limit that occurred in the April, May, and June 2011, monitoring periods. These included 6 days in the April 2011, monitoring period, 12 days in the May 2011, monitoring period, and 3 days in the June 2011, monitoring period. On August 5, 2011, Loudoun submitted a proposed short term plan that included continuing with the engineering study discussed on June 9, 2011, and running the second train. As a short term solution to the turbidity issues, Loudoun proposed installing a bag filter system to provide additional filtration thereby reducing particulate matter associated with higher turbidity readings. The Order requires Loudoun to submit a civil charge and a plan and schedule for both the installation of interim control and long term measures to achieve consistent compliance with CBOD and Turbidity limits. Loudoun has already submitted both plans and schedules required by the Order to DEQ for review. Civil charge $5,200.

Potomac Electric Power Company (PEPCO) - Consent Special Order w/ Civil Charge: Potomac Electric Power Company (Pepco) operates the substation transformer (Transformer) located at 1300 K N. Royal Street in Alexandria, VA (Location). The Transformer is situated within a stone-filled concrete pit. The top edge of the transformer containment pit extends several inches above grade to form a retention dike separating the transformer pit from the surrounding soil.

The containment pit drains to an underground emergency containment reservoir, then enters a storm drain system. This storm drain system ultimately discharges to the Potomac River through GenOn's NPDES permitted Outfall. On January 23, 2011, DEQ was notified of a discharge of non-PCB mineral oil from Pepco substation transformer number 9. On January 24, 2011, DEQ staff conducted an inspection of the Location and observed that mineral oil had been discharged to land adjacent to the secondary containment wall of the transformer and also observed that mineral oil had discharged to a storm drain system and to the Potomac River. Pepco submitted incident reports for the mineral oil discharge to DEQ stating that approximately 4,500 gallons of mineral oil was discharged to the environment due to the failure of a press-fitted flange located between the cooler pump and transformer tank. A Notice of Violation was subsequently issued to Pepco on March 15, 2011 for the discharge of 4,500 gallons of mineral oil to state land and the storm drain system. Pepco has taken several actions to ensure a similar incident will not occur. These actions include: (1) replacing and retrofitting the press-fitted flange located between the cooler pump and transformer tank; (2) identifying other transformers with similar configurations and developing a schedule to replace similar flanges on other transformers; (3) requiring Pepco personnel to use a dip stick to measure the water level in the reservoir and if necessary pump the water level down; (4) lowering the float for the high water alarm to trigger the alarm when the water level exceeds 20 inches; (5) requiring Pepco personnel to record each inspection and pumping event in a log book; (6) hiring an independent engineering company to perform a structural inspection of the underground secondary containment reservoir (the engineering company's investigation concluded that the structural integrity and permeability of the reservoir was not a contributing factor to the discharge of oil); (7) installing a combination pump and oil sensor which allows water to be automatically pumped from sumps without ejecting oily substances into rovers, waterways, etc., and installing Petro-Pipe, which is a pipe that plugs up via a chemical reaction to stop the flow of oil. Pepco estimates that the additional controls cost approximately $50,000.00. Pepco has also conducted a comprehensive review of the Potomac River Substation Spill, Prevention, Control, and Countermeasure Plan. DEQ has determined that no further action is necessary to remediate the discharge. Civil charge: $38,565.

Virginia Electric and Power Company d/b/a Dominion Virginia Power - Consent Special Order with a civil charge: Virginia Electric and Power Company d/b/a Dominion Virginia Power ("Dominion") owns the Phase 1 Oil Terminal ("Facility") in York County, Virginia, adjacent to its Yorktown Power Station ("Station"). The Facility includes two above-ground storage tanks ("ASTs") each of which holds 21 million gallons of heavy #6 fuel oil and is surrounded by bermed secondary containment. A pipeline, Line 159, is one of two steel 24-inch fuel transfer lines owned by Dominion that run west to east between the Phase 1 ASTs and a barge-unloading dock that extends into the York River. For most of its one-and-one-half-mile length, Line 159 runs along the northern perimeter of the adjacent property of Western Refining Yorktown, Inc. ("Western Refining"). There is an earthen berm that runs parallel to (and north of) Line 159. Under the terms of a Terminal Services Agreement between Dominion and Western Refining, at the time of the discharge the latter was responsible for the operation and maintenance of the Phase 1 ASTs and Line 159. The Phase 1 ASTs were among the tanks registered under Western Refining's Facility AST ID Number (5026427). A third party leases the capacity of the Phase I ASTs and stores therein heavy #6 fuel oil, part of which it sells to Dominion for use as fuel in the Station. Prior to the discharge several short sections of Line 159 were located underground below access roads. On November 1, 2010, Western Refining reported to DEQ the discharge of heavy #6 fuel oil that had leaked from a pipe on Western Refining property; containment and cleanup were reported as having been initiated immediately upon discovery of the discharge. In a written response dated November 4, 2010, Dominion identified a leak in Line 159 as the source of the discharge. Line 159 had been isolated and a response contractor was onsite conducting a containment and cleanup. The report stated further that the discharge had been contained within the ditch system on Western Refining property, which had prevented the discharge from reaching State waters. DEQ issued Dominion a Notice of Violation ("NOV") on November 29, 2010, for the discharge of petroleum to State lands. In response to the NOV, Dominion representatives met with DEQ enforcement staff on December 22, 2010, and followed up with a written response dated January 21, 2011. Dominion stated that the ditch where the discharge had occurred had been remediated to pre-spill conditions. A total of sixty cubic yards of contaminated soil had been excavated containing an estimated 700-800 gallons of heavy #6 fuel oil. Dominion's Root Cause Analysis concluded that the discharge resulted from the under-insulation corrosion of Line 159 having caused a small leak in a section of Line 159 that was located underground below the access road between the Dominion and Western Refining properties. Dominion asserted that the steel pipe sleeve around that section of Line 159 had been improperly welded allowing groundwater to enter the annulus between the pipe and the pipe sleeve. A consultant had been hired to perform a guided-wave analysis of Line 159 along its entire length to identify other areas of concern. The representations of Dominion staff were confirmed by a site visit by DEQ enforcement staff on January 31, 2011. On June 15, 2011, a Dominion representative confirmed that the guided-wave analysis had been completed; areas of concern along Line 159 had been identified and repaired; and the section of Line 159 where the discharge had occurred had been

elevated on risers to cross the access road overhead. Dominion reported the total cost of investigation, repair, containment and cleanup to be $1.3 million. Civil charge: $5,600.

FY 2012 Virginia Clean Water Revolving Loan Fund Authorizations: Title IV of the Clean Water Act requires the yearly submission of a Project Priority List and an Intended Use Plan in conjunction with Virginia's Clean Water Revolving Loan Fund Capitalization Grant application. Section 62.1-229 of Chapter 22, Code of Virginia, authorizes the Board to establish to whom loans are made, the loan amounts, and repayment terms. The next step in this yearly process is for the Board to set the loan terms and authorize the execution of the loan agreements. At its September 2011 meeting, the Board targeted 25 projects totaling $99,308,468 in loan assistance from available and anticipated FY 2012 resources and authorized the staff to present the proposed funding list for public comment. A public meeting was convened on November 16th. Notices of the meeting were mailed to all loan applicants and advertised in six newspapers across the state. No adverse comments were received during the public review/comment period. The staff has conducted initial meetings with the FY 2012 targeted recipients and has finalized the associated user charge impact analyses in accordance with the Board's guidelines. The only recommended change to the previously approved list is with the Town of Strasburg. Subsequent to the Town's submittal of their VCWRLF application, they were awarded some funding from the U.S. Department of Agriculture Rural Development for their wastewater treatment upgrade project. This additional funding reduces the need for VCWRLF loan funding down to $12,000,000. Therefore, the 2012 funding list remains at 25 projects being recommended for final authorization at a revised total amount of $88,537,633. The loan terms listed below are submitted for Board consideration. The wastewater applications were reviewed in accordance with the Board's guidelines, with a residential user charge impact analysis conducted for each project. This analysis determines the anticipated user charges as a result of the project relative to the affordable rate as a percentage of the applicant's median household income. The rates/terms for the Brownfield remediation projects are in accordance with the Board's adopted guidelines. Once approved, this information and the approved interest rates will be forwarded to the Virginia Resources Authority (VRA) for concurrence and recommendation. VRA will prepare the credit summaries and financial capability analyses on the recipients authorized for FY 2012 funding, looking at their repayment capability and individual loan security requirements. The program sets its VCWRLF ceiling rate on wastewater loans at 1% below the current municipal bond market rate. VRA recently sold VCWRLF bonds and achieved an all in true interest cost of 3.35%. Therefore, we are recommending that the ceiling rate for the FY 2012 wastewater projects be set at 2.35 % and that that rate be held until June 30, 2012. At that time, DEQ will reevaluate the market conditions and revise the interest rate on any ceiling rate projects that have not closed by that date. Since the Board's September meeting, Congress has still not finalized the federal SRF appropriation for FY 2012. As such, we are unsure as to whether the appropriation bill will include requirements similar to those established in FY 2011 regarding principal forgiveness and green reserve project funding. Staff believes that the water reuse projects already included on this list will satisfy the green project reserve requirement that might be included, and at the same time are worthwhile projects to go forward that meet our program criteria. The staff has also analyzed the projects with regard to the program's hardship criteria and will be prepared to work with the Director on providing principal forgiveness to some projects as allowed by previous delegations if it is included in the appropriation language.

FY 2012 Proposed Interest Rates and Loan Authorizations

	Locality	***Loan Amount***	***Rates & Loan Terms***
1	City of Lynchburg	7,000,000	0%, 30 years
2	City of Richmond	2,600,000	0%, 20 years
3	City of Norfolk	10,000,000	0%, 20 years
4	Alexandria Sanitation Auth.	5,174,000	2.35%, 20 years
5	Western VA Water Authority	9,828,000	2.35%, 20 years
6	Town of Coeburn	2,094,346	0%, 20 years
7	Town of Blackstone	3,713,241	0%, 20 years
8	Botetourt County	910,000	2.35%, 20 years
9	Southampton County	926,450	0%, 20 years
10	Bland County PSA	5,947,035	2.35%, 20 years
11	Town of Tazewell	2,847,806	2.35%, 20 years
12	Town of Strasburg	12,000,000	0%, 25 years
13	Fauquier County	7,102,800	%, 20 years***

14	Eastern Shore of VA PSA	4,000,000	0%, 30 years
15	Smyth County	472,930	2.35%, 20 years
16	Lee County PSA	712,000	0%, 20 years
17	Blacksburg-VPI SA	3,082,000	2.35%, 20 years
18	Louisa Co. Water Authority	1,595,000	2.35%, 20 years
19	Town of Rocky Mount	278,600	2.35%, 20 years
20	Town of Chilhowie	1,061,500	2.35%, 20 years
21	Town of Boydton	1,471,000	2.35%, 20 years
22	Alexandria Sanitation Auth.	2,600,000	2.35%, 20 years
23	CNW Wastewater Authority	2,469,675	2.35%, 20 years
24	Avon Holdings, LLC	531,250	0.25%, 10 years
25	Sembilan Enterprises, LLC	120,000	0.25%, 10 years
	Total Request	**$88,537,633**	

*** Still waiting on additional income information from Fauquier County

Summary of Comments Received During Public Hearing/Comment Period VWP Draft Permit Modification No. 06-1574, Ragged Mountain Reservoir Expansion Project, Albemarle County: To request that the State Water Control Board approve the modification of the Virginia Water Protection Permit for the Ragged Mountain Reservoir Expansion Project:

BACKGROUND:
The Ragged Mountain Reservoir is an existing water supply facility operated by the Rivanna Water and Sewer Authority (RWSA) located on an unnamed tributary of Moores Creek in Charlottesville, Virginia. The Ragged Mountain reservoir system includes an upper and lower dam constructed in approximately 1885 and 1908, respectively. In addition to this reservoir, the urban water system includes several other water supply reservoirs, but specifically related to the existing permit and modification request are the South Fork Rivanna and Sugar Hollow Reservoirs. These reservoirs play a key role in providing additional storage capacity and downstream water releases.

In 1978, the Virginia Department of Conservation and Recreation's Division of Dam Safety determined that the dams did not meet dam safety regulations, and therefore, repairs and/or redesign of the dams became necessary, some of which occurred in the mid-1980s. Based on project documentation, no dam modifications have been implemented to fully address the dam safety deficiencies, and thus, they are currently being operated under "conditional" DCR certifications that have been extended numerous times.

In response to DCR's dam safety requirements, and to meet regional water supply planning goals, the Authority developed an expansion proposal for the Ragged Mountain Reservoir system, which is the context of the existing Virginia Water Protection Permit No. 06-1574, issued in February 2008. The permit authorizes the expansion of the reservoir, replacing the two existing dams with a single new dam, and the continued operation of the reservoir under the limits set forth in the permit special conditions.

The permittee requested a modification of the existing permit on March 24, 2011 to: 1) change the new dam material from concrete to earth-fill; and 2) construct the dam and/or fill the reservoir in two phases (termed the "intermediate-Expanded Ragged Mountain Reservoir"). Based on the request received by DEQ, the earth-fill dam was deemed preferable because of the potential reduction in environmental impacts and costs. The requested revisions affect the dimensions of the dam, and the corresponding total impacts to surface waters. The expanded reservoir requires new storage trigger points in the permit conditions that relate to release of flow downstream. Staff determined that the requested revisions qualified for a Major Modification of the existing permit.

Subsequent to the modification request, the Authority asked the existing time-of-year restriction relating to the Indiana bat be lifted or waived in the existing permit. After coordinating with appropriate state and federal resource agencies, staff is recommending a revision to the permit language that lifts the restriction provided tree-clearing activities begin within two years of the permit modification. Staff recommends that this revision, along with several administrative revisions detailed in Item No. 11 of Attachment 1, be considered as part of the permit modification by the Board.

As part of the modification request review process, DEQ contacted the Virginia Departments of Game and Inland Fisheries; Conservation and Recreation; and Health, as well as the Virginia Marine Resources Commission on August 18, 2011, per §62.1-44.15:20.C. No recommendations or specific comments on the proposed changes were received from these agencies regarding the dam or phasing of construction and/or filling.

PUBLIC COMMENT AND HEARING:
Based on inquiries that DEQ received about the project since the original permit issuance in February 2008, DEQ's Director determined that a hearing was warranted. Members of the State Water Control Board were notified, and no comments were received requesting a meeting of the Board to review the Director's decision to grant a hearing or to delegate the permit to the Director for his decision. The Department proceeded with scheduling the hearing and notifying interested parties.

The joint public notice for development of the draft permit modification and the public hearing was published in the Charlottesville Daily Progress on August 29, 2011.

A public hearing was held at Lane Auditorium in the Albemarle County Administration Building in Charlottesville, Virginia on September 29, 2011 beginning at 6:20 p.m. Mr. Shelton Miles served as the Hearing Officer, and DEQ staff present included Brenda Winn, Scott Kudlas, and Melanie Davenport.

DEQ received comments from the City of Charlottesville, Albemarle County Service Authority, Albemarle County Board of Supervisors, the League of Women Voters, The Nature Conservancy (TNC), Friends of the Moormans River, The Southern Environmental Law Center, the Rivanna Conservation Society, and 10 citizens in support of the expansion project and proposed permit modification, and we received comments from The Sierra Club, Citizens for a Sustainable Water Plan, and 30 citizens in opposition to either the project, the proposed modification, or both. RWSA did not submit comments during the public comment period.

The comments generally relate to the following issues: impacts to surface waters; downstream flows and monitoring flows; project alternatives; data generation, availability, and reliability; calculations of costs, water supply demands, and water source capacities; water supply planning processes; permitting processes; public access; permit compliance; dam safety; and compensatory mitigation. Attachment 1 contains the summary of public comments and the staff response; a full copy of all written comments received by the comment deadline; and a compact disc of the public hearing audio recording (note the full copy of written comments and the cd of the public hearing were provided to the Board members, but are not included in the minibook).

Attachment 1 – Summary of Comments and Staff Response

Ragged Mountain Reservoir Expansion Project
Draft Virginia Water Protection Permit Modification No. 06-1574

1. Issue: Impacts and costs of earth-fill dam vs. concrete dam

Summary of Comments:

The comments received regarding impacts to the aquatic environment from the change in dam construction materials included the following:

- revised dam dimensions result in smaller pool elevation, thus less environmental impacts to the Ragged Mountain Natural Area will occur in the first phase of project
- there is a cost savings for earth vs. concrete dam
- earthen dam produces jobs and less impact on residents
- earth dam has larger footprint, increasing stream impacts
- blasting stream bed will be necessary, resulting in noise and dust to surrounding residents
- forested areas will be cut down around existing reservoir

- environmental and safety concern with expansion of reservoir water under Interstate 64; several documented toxic spills; must be structural mitigation to keep any toxic material from compromising the reservoir
- cost of new dam and pipeline is huge and will burden tax and rate payers

Staff Response:

Based on the information provided to DEQ, an earth-fill dam would be larger at the base than a compact-rolled concrete dam. The permittee reported that an additional 699 linear feet of stream bed impacts and an additional 0.02 of an acre of wetlands would be necessary for excavation and fill to construct an earth-fill dam. The proposed earth-fill dam would be three feet shorter (elevation 683), reducing stream bed impacts from inundation (backflooding) by 1,250 linear feet. During the term of this permit, the earth-fill dam option avoids and minimizes any stream impacts from inundation, and does not significantly increase stream and wetland impacts from that originally authorized. The VWP Permit Program does not regulate activities that cause impacts to forest in upland areas. The compensatory mitigation proposed for the original issuance will provide compensation for the additional 699 linear feet of stream impacts and 0.02 of an acre of wetland impacts.

The construction of a dam, regardless of the material used, continues to meet the purpose and need on which the project permit is based. The dam safety improvements being mandated by the Virginia Department of Conservation and Recreation's Dam Safety Division will incur some costs regardless of the ultimate dam dimensions.

While project costs are one aspect of all project alternatives that staff evaluates in a Virginia Water Protection permit application, they have no higher priority than any other criteria used to establish the least environmentally damaging practicable alternative (9VAC25-210-115.C.2.c). Cost estimates are the responsibility of the applicant or permittee. DEQ typically accepts these estimates when prepared by qualified parties and bases its review on other similar projects.

By statute, permit conditions are imposed that are necessary to protect beneficial uses, giving domestic use and other existing beneficial uses the highest priority. The existing permit and draft modification contain such conditions. Staff believes that these conditions, along with DEQ's programs to respond to environmental emergencies, will protect surface waters to the maximum extent possible.

Staff recommends that the change in dam construction materials be approved.

2. In-stream flows and downstream water releases

Summary of Comments:

- modification and pipeline provides supply and important flows; pipeline will capture some high flow events to increase safe yield
- proposed project modification is only option that provides enough supply while restoring flows in Moormans
- Moormans home to T&E species and plan will improve flows
- pleased that the voluntary releases to mimic the natural conditions of instream flows will be made a part of the permit
- original permit and modification based on flow data from gage on Mechums River instead of Moormans River

- include a requirement in the permit that the permittee conduct a comprehensive survey of aquatic life in the Moormans River during all seasons to identify those species that would be adversely impacted by the proposed increase base flow
- need real hydro study to be done
- nothing preventing more release to Moormans now
- under adopted plan, release from Sugar Hollow during dry periods will result in unnaturally high flows in Moormans
- dredging the current South Fork Rivanna Reservoir along with a 13' concrete addition to the Ragged Mountain Dam provides for the same stream flow relief as designated in the permitted and modified plans
- add one or more special conditions: define when work on a Phase II expansion should begin/be completed, based on measurable criteria that are function of increases in demand, changes in system storage, assessment of safe yield, and timing of pipeline construction; add formula or method to determine when 30-ft pool needs to be increased to 45-ft pool; explain what decision making process will be; add agreement between city and authority as condition of permit to enforce partnership

Staff Response:

Prior to the issuance of the existing permit, there were no mandatory minimum flowby requirements or water release requirements on any of the existing reservoirs in the RWSA system due to their age (preceded current law/regulation). The State Water Control Law and Virginia Water Protection Permit Program Regulation now require such conditions to be placed into permits to protect beneficial uses. As part of the required permit process, the Board is directed by law to consult with and give full consideration to the written recommendations of certain agencies prior to issuance of a Virginia Water Protection permit, including the Department of Game and Inland Fisheries (DGIF) and the Department of Conservation and Recreation, among many other interested and affected agencies. Such consultation includes the need for balancing instream uses with offstream uses.

During the development of the original permit, flow targets downstream of the Ragged Mountain Reservoir were negotiated between The Nature Conservancy and the Rivanna Water and Sewer Authority. DEQ worked with DGIF and The Nature Conservancy to arrive at instream flow and dam release rules for the permit that are believed to protect fish and wildlife habitat, including but not limited to continuing to release water into the Moormans River to enhance survival of larval-stage mussels during times of low flow. DEQ also added conditions to require water conservation, to develop a flow monitoring plan, to limit transfers between the Sugar Hollow Reservoir and the Ragged Mountain Reservoir and allow transfers between the South Fork Rivanna Reservoir and Ragged Mountain Reservoir, and to require passage of a certain percentage of inflow between the two Ragged Mountain dams. Flowby and release requirements vary with the amount of water stored.

While DCR did not provide specific flow recommendations to support recreational uses during the development of the original permit, it was involved and continues to be involved with the dam safety issues previously identified at the Ragged Mountain dams.

The use of a United States Geologic Survey (USGS) gage on the Mechums River during the development of the original permit, and applying a drainage area factor to calculate natural inflow to the South Fork Rivanna and Sugar Hollow Reservoirs, is an accepted methodology in modeling stream flows, and was the best available method at that time. The USGS gage on the Moormans River near Free Union was not

operational between mid-1997 and mid-2005, and did not include the 2002 drought of record. Since then, DEQ has improved its modeling capability considerably. As a result of the modification request, staff specifically requested the permittee and its consultant to provide data that supported no change in the downstream target flows developed during the original permit issuance. Based on staff review of the Hydrologics, Inc. Evaluation of Flow Releases report dated April 8, 2011, we conclude that the data provided was reasonable and that the requested revisions to dam releases from an earth-fill dam are not expected to affect the established downstream target flows.

No comments were received regarding the specific instream flow and/or dam release values in the draft permit modification. However, two citizens commented that they felt there was a need to add one or more conditions regarding the project phasing. Suggestions included: defining when the work on a the full expansion should begin and/or be completed, based on measurable criteria that are a function of increases in demand, changes in system storage, assessment of safe yield, and timing of pipeline construction; explaining what the decision making process will be; and adding an agreement between the City of Charlottesville and the permittee to enforce the partnership. Staff agrees that some mechanism for a periodic evaluation and/or modification of permit terms may be necessary to meet the project purposes and need. Through one provision of the Water Supply Planning Regulation 9VAC25-780, there is a mechanism for DEQ to monitor demand and use in the area subject to the existing permit and proposed modification. The Regional Water Supply Plan must be reviewed every five years, and if circumstances upon which the plan was based have changed, or new information indicates that water demands cannot be met by the alternatives contained in the Water Supply Plan, then the Plan must be updated and re-submitted to the Virginia Department of Environmental Quality for approval. We believe that this provision will provide such periodic evaluation and review.

Staff recommends that the revised flow and release values presented in the draft permit modification be approved.

3. Issue: Alternatives to the permitted project

Summary of Comments:

<u>Dredging</u>

- two studies requested by DEQ analyze dredging with respect to demand and supply, show that dredging will not meet demand in next five years let alone 50 years
- one-time dredging does not provide for downstream releases from Sugar Hollow or provide for demand
- HDR Engineering, Inc. analysis in 2010 found dredging South Fork Rivanna Reservoir would provide 151 mg storage, about 15% of that gained from the phased modification dam height
- review alternatives proposed in past; dredging option is viable considering difference in supply and recent demand studies
- better alternative plan is to dredge the South Fork Rivanna Reservoir adding over 260 million gallons of water storage and repair the defective spillways; combination of dredging and partial pipe repair would give us new water capacity of about the size of the existing Ragged Mountain Reservoir
- neighbors would like to purchase sediment in reservoir; dredging may be a commodity of value; dredging will eliminate trucks for concrete dam; reconsider "Norris" dredging plan
- in 2006, dredging presumed to be least environmentally damaging practicable alternative in South Fork Rivanna reservoir, and increased rates to pay for it; one-time dredging would restore to original usable capacity plus some for a safety margin

- new info estimates long term dredging costs to be higher than current estimates
- dredging the South Fork Rivanna Reservoir was summarily dismissed because of flawed cost estimates and flawed estimates of sedimentation rate

Other

- why are RWSA and TNC not asking for Sugar Hollow dam to be removed to restore flows?
- repair water leaks in our system
- conservation measures will continue to be effective
- continued retrofitting of fixtures in older homes and buildings should be allowed to play out and concurrent public service announcements to change people's behavior; should encourage use of cisterns or other effective means of catching substantial amounts of rain water for gardening purposes or flushing toilets
- reduce sedimentation including dredging and other land use controls
- account for other localities that border Rivanna River that may need supply such as Fluvanna and Louisa Counties; other localities missing from project plan and discussion

Staff Response:

With the exception of removing dams, all of the alternatives commented upon were evaluated during the original permit issuance (Vanesse Hangen and Brustlin report February 2000 and Gannett Fleming report July 2004). The existing project was found to be the least damaging practicable alternative that met the project purpose and need, and also provided for protection of beneficial uses. The proposed permit modification also meets the criteria established in regulation for determining the least damaging practicable alternative.

Costs are but one of nine criteria considered in determining the least damaging practicable alternative but is given no higher priority than any other in the list. The purpose and need of the project drives the permit issuance process and is heavily dependent upon historic and forecasted water supply demand.

The applicant must identify the methods and assumptions used to derive the requested amount of water, and such projections must be based on acceptable sources of data and result in reasonable conclusions about the projected water need. All assumptions regarding population and employment growth, amounts of land-use change, and per capita water use figures must be clearly identified by the applicant.

In the field of water supply planning, there are seven common methods for determining demand described in the American Water Works Association (AWWA) *Water Resources Planning Manual M50*. Acceptable sources of data for population projections include the U.S. Census, Virginia Employment Commission, Virginia Economic Development Partnership, Weldon Cooper Center for Public Service, and locally derived data, such as water service connection records. For planning purposes, demand is typically projected for a 30 to 50 year planning horizon. However, for the purposes of the Virginia Water Protection permit, only that amount which can be put to use over a 15-year permit term is authorized. If the withdrawal is to continue past 15 years, a new application is required and re-evaluation of what portion of the projected demand has come to fruition must be considered.

Staff concludes that a variety of demand forecasting methodologies were utilized between 1997 and 2011 in support of permitting and planning efforts. Early forecasts averaged four approaches to project demand, resulting in projected water demands of 14.5 mgd in 2025 and 18.7 mgd in 2055 [not inclusive of conservation], while the most recent forecasting utilized the Disaggregate Water Use Model that forecasts

future water use for each customer type by applying water use patterns to the future customers within that specific water use category, which produced estimates of 12.5 mgd in 2025 and 17.2 mgd in 2055 [inclusive of conservation]. It is expected that the disaggregation methodology resulted in a lower projected demand than other population-based methodologies used in earlier demand projections. The important conclusion to be drawn from the combination of all of this effort is that predicting the future is problematic, not that one method predicted the "right" answer and one did not. All of the projections will be "wrong" to some degree fifty years from now.

The difference in year 2055 represents approximately 1.5 million gallons per day, which as a matter of professional practice, is not considered to be statistically significant in terms of accepted water supply planning methodologies for a 50-year projection. An estimate of future demand is then compared to the likely worst case drought conditions and available volumes of water to attempt to quantify the amount of risk that a locality or utility is willing to accept regarding the probability that their projection of future demand is adequate. This is largely a local decision to the extent that the demand projections, methodologies used, and the corresponding results are reasonable. Most applicants manage this risk through a combination of conservation methods and sizing storage to meet the highest projected need during the worst case drought. DEQ has reviewed the permittee's demand estimates and finds them to be reasonable methods to project future demand and that the estimated storage yield proposed to meet these future demands is reasonable.

Based on staff review of the dredging alternative studies performed by various consultants, none were able to meet the project purpose and need and still protect beneficial uses downstream, based on the demand reviewed and approved by DEQ during the original permit issuance.

DEQ is not opposed to RWSA pursuing additional storage capacity on any or all of the reservoirs in the system through maintenance dredging or water conservation measures. However, we consider this to be a local planning decision. DEQ would require RWSA or any other proponent of dredging to apply for a VWP permit.

Staff recommends that no changes be made to the draft modified permit regarding the need for dredging the South Fork Rivanna Reservoir.

4. Issue: Supporting studies, reports, etc.

Summary of Comments:

- public misled by data from some groups
- look at information, studies, reports to see if modification still warranted
- public controversy due to facts no longer valid; inflation of numbers and manipulation of data
- new studies/reports have not changed previous studies outcomes
- proposed expansion of the Ragged Mountain Reservoir is predicated on a flawed projected water demand analysis and flawed assumptions of the safe yield
- demand analysis off base - based on extrapolation of high growth period, 10% population decrease and 20% demand decrease
- three new studies show substantial change; demand in 2055 about 2 million gallons per day less; 30% less water use in 2010 that permit was based on; costs for dredging lower than reported in application for 50 yrs
- request new consumption data, lower than projected

Staff Response:

There are numerous reports, technical memorandums, studies, and evaluations regarding the permitted project and the requested modification that were contracted through a variety of consultants, as summarized in Table 1 of this memorandum.

Various DEQ staff has evaluated these reports and studies during the original permit issuance and modification process and continues to support the existing project as the least environmentally damaging practical alternative based upon the VWP Permit Program Regulation criteria and staff modeling evaluations.

For the reasons stated here and previously, staff does not recommend any changes to the draft modified permit as a result of the studies, reports, memos, and evaluations conducted to date.

5. Issue: Termination of permit and denial of modification request

Summary of Comments:

Request existing permit be terminated due to:

- proposed expansion of the Ragged Mountain Reservoir is predicated on a flawed projected water demand analysis and flawed assumptions of the safe yield
- no need for new dam versus dredging based on demand
- permittee failed to disclose fully all relevant facts and misrepresented relevant facts during the permit issuance process and subsequent to the issuance of the permit
- the permitted activity endangers the environment and can be regulated to acceptable levels by permit modification or termination
- there have been changes in conditions that require a permanent reduction or elimination of activities controlled by the permit
- new information has become available about water use, water demand, current capacity of South Fork Rivanna River reservoir, and dredging specifications that would have justified the application of different permit conditions
- circumstances on which the permit was based, specifically the water demand projections and dredging specifications, have changed; new projected water demand analysis by the permittee is expected to show material and substantial change in the projected water use

Staff Response:

Based on staff review of the information available during both the original issuance process and the modification request review process, we do not anticipate that either the original permit or a modified permit will impact beneficial uses. As stated previously, staff does not have reason to suspect that the original permit or a modification thereof is based on flawed or purposely misrepresented information. The permit is based on currently accepted professional methodologies in water supply planning and stream flow science. The most recent studies regarding demand projections were developed in support of the Regional Water Supply Plan required by that regulation, and while conclusions on demand may differ, they are well within the acceptable range for a 50-year planning horizon. DEQ staff believes the permittee's demand estimates to be reasonable, as well as the most-recent studies to determine the safe yield of the Rivanna Water and Sewer Authority (RWSA) water system.

To the best of staff knowledge, the permittee has fully disclosed all relevant material facts, and has not misrepresented a material fact in applying for either a permit or a modification thereof. Staff suggests that the permittee's proposal to modify the stream flow and release conditions contained in the permit is not a

material change in the basis on which the permit was issued. Staff further suggests that the proposed modification is protective of beneficial uses, human health, and the environment, specifically as downstream flow targets negotiated during the original permit issuance were shown to be met under the revised conditions.

Staff determined that the RWSA is in compliance with its existing VWP permit, and has submitted the Regional Water Supply Plan in accordance with the deadline established in that regulation.

Staff does not recommend suspension of the existing permit, as suspension of VWP permits are not authorized by the Code of Virginia or the Virginia Administrative Code.

Considering the extensive coordination effort that occurred to arrive at the conditions in the original permit; that the project supports regional water supply planning program goals; and that staff did not find cause for any of the six termination criteria, staff does not recommend that the Board terminate the existing permit.

Staff did find that one criterion for modifying the original permit has been demonstrated and therefore, recommends that the Board approve the requested major modification of the permit as drafted herein.

6. Issue: Permitting, modification, planning, and public participation processes

Summary of Comments:

- study by a professional outfit projected the city population in 2050 to be 71,500 persons but its staff noted inherent problem with predictions out to 50 yrs
- spending hundreds of millions of dollars on poorly justified projections is not a good idea
- reevaluate [need of project] based on current [demand] data and provide adequate public input
- DEQ should have followed a better hearing procedure [for original permit issuance], as no hearing was ever held
- pattern of faulty data and misinformation for original permit basis
- public hearing [for proposed modification] supposed to start at 6 pm, started hearing at 6:20
- public policy is flawed and so is way DEQ made decisions along the way
- SWCB look at possibility of fraud and manipulation of data on purpose
- phasing is response to community concerns
- water supply plan has been open process with lots of public participation and meetings
- new information in studies and reports hasn't changed previous studies' outcomes

Staff Response:

Water supply planning in Virginia is consistent with the Integrated Resource Planning Process (IRP) described in publications by the American Water Works Association (2008). While the accepted methodologies in planning for future water supply does incur some unknowns, particularly in forecasting use demands into the future, these methods are based on factual data, such as but not limited to historical and current population and economic trend data; historical and current water use data; historical and current water and sewer connection billing records; housing unit sales and/or rentals; employment and/or unemployment rates; business openings and/or closures; and web-based research on community current events. To the best of our knowledge, staff did not review any population or demand projections that were on face-value deemed irrelevant, outdated, or falsified.

Changes to the Virginia Code in recent years have made the public participation process on permit actions more predictable and inclusive. Based on staff's understanding of the previous permit issuance, the criteria for requesting a public hearing was not met, and therefore, a hearing was not granted.

Regarding the late start of the public hearing, staff intended for an information session to be held prior to the start of the hearing, but that was not reflected in the public notice. We apologize for any inconvenience to the participants.

Staff does not recommend changes to the draft permit modification due to the administrative, planning, and coordination processes followed in issuing the existing permit or developing the draft permit modification.

7. Issue: Public access

Summary of Comments:

Please consider public access to Rivanna and Moormans Rivers and if public access was considered during original permit

Staff Response:

The existing VWP permit requires the permittee to provide the public with access to Ragged Mountain Reservoir.

Staff does not recommend changes to the draft permit modification regarding public access.

8. Issue: Permit compliance

Summary of Comments:

- page 14 of permit has condition requiring equipment two years after permit issuance but has not been installed yet
- gages on Moormans never installed
- permit required infrastructure that has not been done

Staff Response:

On October 9, 2008, staff received the First Version of the Flow Measurement Design Plan and Operations Manual that is required by the existing Virginia Water Protection Permit No. 06-1574, issued February 11, 2008 (Part I.F.5), within the eight-month deadline from permit issuance.

In its First Version of the Flow Measurement Design Plan and Operations Manual dated October 2008, the RWSA reported installing in April 2008 "a flow monitoring device on the 18" cast iron raw water line located on the road side below the dam approximately twenty feet from the gated dam tunnel entrance" at the Sugar Hollow Reservoir, and in May 2008 "a flow monitoring sensor in the 36-inch discharge pipe attached to the South Fork Rivanna River Reservoir dam's southside mud gate". Staff presumes that this is how subsequent flow release data was provided and reported to DEQ for the South Fork Rivanna and Sugar Hollow Reservoirs in January 2009, in accordance with the permit requirements.

The permittee is currently in compliance with the existing permit, and therefore, staff does not recommend any change to the draft permit modification regarding the permit compliance.

9. Issue: Seismic safety

Summary of Comments:

The RWSA held public meeting regarding inundation zone if dam failed; why nothing in permit to address seismic safety and should be considered

Staff Response:

The Virginia Water Protection Permit Program does not regulate dam safety, but understands that the Virginia Department of Conservation and Recreation, Division of Dam Safety, addresses safety issues through its certification process. Seismic safety is a matter of professional engineering that staff is not qualified to approve, disapprove, or speculate upon. However, staff notes that the Schnabel engineering firm evaluated the stability of the earthen dam design under normal operating conditions, during a rapid drawdown of the reservoir, and during seismic loading in its Preliminary Design Report dated May 14, 2010.

Staff does not recommend changes to the draft permit modification regarding seismic safety.

10. Issue: Mitigation

Summary of Comments:

- unable to determine whether the mitigation occurs on public lands
- question why the mitigation is aimed at public rather than private properties where there may be a real need to get farmers to fence off streams or provide stream buffers
- Ragged Mountain would seem the most appropriate place to mitigate wetlands loss since it is the locus of the expansion

Staff Response:

Two compensatory mitigation sites have been conceptually approved by staff. The Moores Creek site, located on the floodplain east of Franklin Street in Charlottesville, has been acquired for a wetlands compensation project. The Buck Mountain site, located north and south of Route 665 north of Charlottesville, is owned by the Authority and is planned to be used for stream compensation. Buffers are required along wetlands and streams and livestock is not allowed access to compensation areas. Compensation areas must be placed under a perpetual protective instrument, such as an easement. While it has been found that the natural return of wetland areas around the perimeter of a reservoir may replace some or all of lost wetland acreage, it has been found not to replace lost functions and values. Therefore, such natural re-vegetation, while encouraged, has not typically been approved for compensatory credit by DEQ.

Staff does not recommend changes to the draft permit modification regarding compensatory mitigation.

11. Other administrative revisions

No comments were received on the staff proposal to revise the special condition regarding surveys for the Indiana bat, which would require the permittee to re-survey if construction does not begin within three years

of July 26, 2011, based on recommendations made by the Virginia Dept. of Game and Inland Fisheries and the United States Fish and Wildlife Service.

No comments were received regarding the inclusion of golf courses in the mandatory water conservation measures listed in Attachment A, which was inadvertently left out of the current permit.

No comments were received regarding deletion of redundant and repetitive statements regarding mitigation of unauthorized impacts or other grammatical revisions.

Tables

Table 1: Summary of Reports, Studies, Memorandums, Evaluations

Purpose	Vendor	Date	Conclusions
safe yield and demand	Vanesse Hangen and Brustlin, Inc./O'Brien & Gere Engineers, Inc.	October 1997 (Draft)	used 1930 as drought of record; current estimate of safe yield is 11.9 to 12.6 mgd; safe yield estimated in 2050 is 4.5 mgd to 4.8 mgd due to sedimentation decreasing capacity system-wide; four sets of demand calculations prepared, yielding estimates ranging from 17.75 mgd to 20.51 mgd in 2050; not possible to conclude one estimate technique is better than any other
safe yield	Gannett Fleming	January 2004	safe yield for entire system was 16 mgd (2002 usable storage = 1586 mg, no releases)
alternatives and safe yield	Gannett Fleming	July 2004	9.9 mgd supply deficit in 2055; predicted an increase in safe yield by 5.1 mgd by dredging SFRR; cannot rule out the possibility that, supplemented by other supply sources, dredging may comprise a viable concept to meet long term demand, and could provide some flexibility in terms of phasing improvements; estimate of current safe yield for entire system was 12.8 mgd (three additional reservoirs, inclusion of Crozet w/d from BCR, evaporation and storage differences, drainage area differences) and in 2055 would be 8.8 mgd (sedimentation SFRR)
safe yield	Gannett Fleming	February 2005	estimates an average daily water supply deficit of 9.9 mgd in 2055
safe yield	Hydrologics, Inc.	August 2011	looked at 2020 and 2055 and found for one-time dredging, yields were 9.2 mgd and 9.7 mgd, resp. (assumed demands of 9.2 mgd and 6.7 mgd resp.), and not possible for one-time dredging to produce downstream releases in 2055 that are currently permitted and would not meet 2055 demand; for repeated dredging, found yields were 10.3 for 2020 and 2055 and would not meet target flows downstream or meet demand

Table 1: Summary of Reports, Studies, Memorandums, Evaluations			
Purpose	**Vendor**	**Date**	**Conclusions**
project alternatives	Vanesse Hangen and Brustlin, Inc.	February 2000 (Draft)	safe yield of South Fork Rivanna Reservoir shrinking at rapid pace due to sedimentation; alternatives with significant potential to reduce, control, or manage demand, or increase or improve efficiency of existing or future supplies were developed and evaluated
dredging	Gannett Fleming	December 2003	feasibility of dredging SFRR could not be determined and recommended further investigation
dredging alternatives	HDR	June 2010	dredging 1,126,010 cy would restore all of the useable water supply volume plus 56% of the water supply volume below the water intake elevation of 367 feet in the Upper Main Stem and Ivy Creek portions of the Reservoir
dam alternatives	Schnabel	July 2010	constructing the full height dam while staging the filling of the reservoir (Option 3) has many advantages over phasing the construction of the embankment (Option 2); impacts to the community are incurred primarily during the initial construction period; cost savings by proceeding with Option 3 and the combined cost of both phases of Option 2 (not including contingency) is $3,600,000; Schnabel's opinion that Option 3 is the preferred alternative of the three
demand	Gannett Fleming	May 2004	demand (considering VHB 1997 estimates, averaging four demand calculations) will be 15.26 mgd in 2025 and 19.29 mgd in 2055; if factor in water conservation, 2025 estimate is 14.5 mgd and 2055 estimate is 18.7 mgd
demand forecast methodology	AECom	May 2011	method is based on the "Disaggregate Water Use Model" outlined in the American Water Works Association (AWWA) M50 Water Resources Planning Manual (AWWA M50 Manual). The Disaggregate Water Use Model forecasts future water use for each customer type by applying water use patterns to the future customers within that specific water use category (e.g., single- family residential)

Table 1: Summary of Reports, Studies, Memorandums, Evaluations			
Purpose	**Vendor**	**Date**	**Conclusions**
demand	AECom	July 2011	urban system demand in 2025 to be 12.5 mgd and in 2055 to be 17.06; for urban plus Crozet and Scottsville, results were 13.23 mgd and 18.16, resp.; when factor in existing water conservation through 2060, results were 17.01 mgd for urban and 18.08 mgd for urban plus Crozet and Scottsville; recommended planning for 12.05 mgd in urban through 2025 and 16.26 mgd through 2055 in urban, and adding in Crozet and Scottsville, those results become 12.72 mgd in 2025 and 17.27 mgd in 2055
demand	AECom	September 2011	estimated water demand for 2025 is 12.3 mgd for urban and 13.01 mgd for urban plus Crozet and Scottsville, and for 2055 is 16.96 mgd for urban, and 18.04 mgd for urban plus Crozet and Scottsville
geotechnical issues/design/costs	Schnabel	September 2008	proposed foundation below level were rock quality suitable for RCC dam, likely require blasting and concrete backfill; additional geotech explorations would be beneficial; potential cost savings with design of dam wall abutments
preliminary dam design/costs	Schnabel	May 2010	proposed dam will be a 135-foot-high zoned earthen embankment with 2.75H:1V upstream and downstream slopes. The crest of the dam will be 25 feet wide at an elevation of 695.5 feet; The proposed borrow areas are in close proximity to the new dam, with the majority of the area below the water surface of the raised reservoir; Based upon the preliminary design evaluation as described herein, Schnabel has estimated that the cost to construct an earthen embankment dam at the proposed site would range from approximately $20,300,000 to $27,100,000. This range includes a cost factor ranging from -10% to +20%. The cost for engineering design and construction observation and testing services, including a 10% cost factor, was estimated to be $4,100,000

Table 1: Summary of Reports, Studies, Memorandums, Evaluations			
Purpose	**Vendor**	**Date**	**Conclusions**
flow/release rules	Hydrologics, Inc.	April 2011	evaluation of flow releases concluded release rules essentially reproduce the existing, permitted minimum flows downstream from SHR and SFRR during two additional scenarios: an intermediate Expanded Ragged Mountain Reservoir without a pipeline, and an intermediate Expanded Ragged Mountain Reservoir with a pipeline; in both cases, the reductions in the safe yields of the corresponding fully-Expanded Ragged Mountain Reservoir are on the order of 10 to 20 percent

Table 2: List of Commenters		
Bold font indicates person spoke at public hearing 9-29-11		
Last Name	**First Name**	**Affiliation**
Artrip	Floyd	
Bieker	**Dan**	
Blount	**Colette**	
Bowers	**Kirk**	
Cannon	**Brevy**	
Collins	**Brandon**	
Collins	**Richard**	
Condon	Marlene	
Cruickshank	**John**	
Dempsy	**Susan**	Citizens for a Sustainable Water Plan
Fife	**Francis**	
Freilich	**Sam**	
Gilges	**Bob**	
Goodling	**Linda**	League of Women Voters
Halbert	**Jason**	
Johnson	**Kurt**	Friends of the Moormans River
Jones	Maurice	City of Charlottesville
Kittrell	Bill	The Nature Conservancy
Koch-Sheras	**Phyllis**	
Levering	**Martha**	
Lloyd	**Richard**	
Lorber	**Jean**	The Nature Conservancy
Lynch	**Kevin**	
Martin	**John**	
Martin	**Kenneth**	
Matthews	**Joy**	

Table 2: List of Commenters		
Bold font indicates person spoke at public hearing 9-29-11		
Last Name	**First Name**	**Affiliation**
Mooney	**Betty**	
Mooney	**Joe**	
Morrison	**John**	
Napoleon	**Pat**	
Olivier	**Tom**	The Sierra Club
O'Neil	**Melissa**	
Palmer	**Liz**	
Parish	**Rick**	Southern Environmental Law Center
Politis	**Lee Morgan**	
Quinn	**Rebecca**	Citizens for a Sustainable Water Plan
Roberts	**Clearance**	Albemarle County Service Authority
Rohdie	**Matthew**	
Rooker	**Dennis**	Albemarle County Board of Supervisors
Salidis	**Joanna**	
Salidis	**Stratton**	
Savage	**Robbi**	Rivanna Conservation Society
Schuyler	**Ridge**	
Seaman	**Linda**	
Slaughter	Katherine	
Smith	**Dede**	Citizens for a Sustainable Water Plan
Smith	**Downing**	
Sobotincic	**Rudolph**	
Statman	**Richard**	
Thomas	**Sally**	
Wheeler	**Clara Belle**	
Wieder	**Andrea**	
Wilson	**Jack**	
Wolowiec	**Len**	
Young	**Emerald**	